

ABSTRACT OF THE DISCLOSURE

A turbocharger speed controller includes a rising rate limiter having an input receiving a turbocharger speed signal and an output producing a rate limited turbocharger speed signal, a high envelope filter having an input receiving the rate limited turbocharger speed signal and an output producing a filtered and rate limited turbocharger speed signal, a turbocharger speed control signal generator having an input receiving the filtered and rate limited turbocharger speed signal and an output producing a turbocharger speed control signal based on comparison of the filtered and rate limited turbocharger speed signal with a desired turbocharger speed, and a swallowing capacity control mechanism responsive to the turbocharger speed control signal to vary a swallowing capacity of the turbocharger.